November 13, 1947.

Dear Ed-

The arrangement defined by your letter to Boivin seems fine to me, and I am glad to be a party to it. The only possible reservation is that Boivin himself may be in a poor position to do nutritional research at Strasbourg, but that is a matter for future determination. With the two or three of us checking the identical processes in different laboratories any fallacies should be cleared up provided we are all patient enough, which is a certainty.

I brought the mutants you listed with me, so that I have the set covered by the numbers 114-143. I am in process of regenerating my phage stocks, and hope to have resistant mutants of C1 and of C2 and mutants in a couple of weeks, as well as fermentative mutants.

Here is a list of some cultures being sent you and as much of their characteristics as have been checked:

W-1	from Y-53 (T-L-B_1-Lac-)		Mustard,	Maltose-
W-2	from 58-161 (B-M-)		Mustard	Galactose-slow
W-3	from Y-53		"	Maltose- (same as W1?)
W-20	58-161		"	Maltose-
W-30	58-161		"	Lactose-
W-35	"		UV	Lactose-
W-36	"		"	"
W-33	W-1	Lac-reversion		Malt-Lac+
W-34	W-3	" "		Mal- Lac+
W-39	58-161		UV	Lac-
W-40				
W-42				
W-43				

prob. contam.

W-44,45,47,48,49..... all these are probably independent Lac- mutations.

The other numbers from W-37 through W-50 are Lac+ associated with Lac- as explained:

In the UV experiments, 10^8 cells were spread on EMB agar, then irradiated with a dose p8=6, i.e. survival ca. 100 per plate. Approximately 1 colony per thousand-tenthousand is a mutant. The mutants usually (4/5) occur as white sectors of varying size in a dark colony. This affords further support to the general notion of delayed effect but throws out phenotypic delay as a factor. It cannot be decided whether this represents some sort of segregation or a delay in the ultimate effect of the radiation. I am looking forcolonies with more than one allelic

change, which is why I am keeping the Lac+ components of sectored colonies.

I am also sending Y-10 and Y53, after having tested them. The thiamin-requirement is a little shaky in these, but probably most of the population is still B_1-less. W-1 derived from Y-53 gives a pretty good test although it will adapt after 48 hours and probably my glassware is far from being as clean as it should be . They are all T-L- OK.

Our Easter vacation is substantially the week of April 18. This would be the most favorable time for me to come East and submit my thesis for oral examination. Would this be at all satisfactory to the Department, or does this overlap your own vacation period? Brink suggested, not quite seriously, that I ask whether I could not be examined in Chicago during the meetings, but I suspect that there will not be quite enough of a Yale representation. Have the Tatums planned on attending these meetings? The Sonneborn Day, and the various mikrobiogenetics symposia planned for Dec. 29-31 should make them professionally attractive.

(Lilly Labs.) Strains 58-3214, Y10, and Y26 have been sent to Dr. Mary Jane Ward at her request for exacting, T1-sensitive strains. She wanted Y-9 also, but I don't have a live culture. Could you send a lyophil tube?

Except for these fermentation mutants not much has been happening. Please indicate whether I should ask BIOCHEM to bill you 12 bits for Seminar Subscription.

What news of Proteus, of imino-acids, of folic, of cytoplasm in Neurospora?

Thanks for the data pads. Best regards, and Merry Christmas (We were blanketed in snow here!)

Sincerely,